REMARKS

In response to the rejection of claims 1-12 under 35 USC 103 as being unpatentable over U.S. Patent No. 6,549,678 to Gindele et al. ("Gindele") in view of U.S. Patent Pub. 2002/0159631 to Prentice et al. ("Prentice") and the rejection of claims 13-16 as being unpatentable over Gindele and Prentice and further view of U.S. Patent No. 7,071,978 to Hunter et al. ("Hunter"), Applicant traverses the rejections because the combination of Gindele and Prentice or the combination of Gindele, Prentice and Hunter do not disclose or suggest the combination of claim elements in the claims for the reasons below so that the rejections should be withdrawn.

Claims 1-12

These claims were rejected based on the combination of Gindele and Prentice. However, the combination of Gindele and Prentice does not disclose or suggest each claim element and the rejection should be withdrawn for each claim.

Claim 1

Claim 1 recites "subdividing an incident color channel signal of a pixel into a first and second signal component, the first signal component being a low pass component and the second signal component being a high pass component", "applying a gain factor to one of said signal components, the gain factor being based upon the contribution of the incident color channel signal to total luminance of the display" and "subsequently recombining said first and second signal components into an exiting, modified color channel signal" that are not disclosed or suggested by the combination of Gindele and Prentice.

Gindele shows a method for improving the perceived resolution of a color computer display 30 as shown in Figure 1. A pedestal splitter 30a takes on the red channel, for example, and splits it into components Rtxt and Rped. *See Gindele at Figure 2, column 3, lines 45 to 67.* After that, a slope calculator 37 applies a scalar constant, which supposedly corresponds to the claimed gain factor, based on the color's texture displacement in the overall image, which is also a function of their overall brightness contribution since the color placement of the color channel is factored into the calculated midtone gain. *See Gindele at Figure 2, column 5, lines 5 to 55.* Finally, the texture signal and the pedestal signal are recombined in an adder and exit the system as transformed color image which could be displayed on a computer screen. *See Gindele at*

Figure 1, 2, columns 3s lines 23 to 44. The Rtxt and Rped signals in Gindele are pedestal signal (a smooth representation of a digital image channel except for large transition edges) and a texture signal. *See Gindele at col. 4, lines 10-16.* Gindele does not disclose or suggest the claimed subdividing of the incident color channel signal of a pixel into a low pass component and a high pass component, applying a gain factor to one of the low pass component and a high pass component and subsequently recombining the low pass component and a high pass component.

Prentice teaches a color-specific gain factor control based on the luminance channel which is the contribution to the overall luminance of the display when extracted from the image data as a whole. In this way the filtering system of Prentice would be able to factor in the contribution for each of the color channel in terms of luminance when applying color-specific filtering. *See Prentice at Figures 2, 3, paragraphs 16 to 18.* Prentice does not disclose or suggest the claimed subdividing of the incident color channel signal of a pixel into a low pass component and a high pass component, applying a gain factor to one of the low pass component and a high pass component and subsequently recombining the low pass component and a high pass component.

Thus, the combination of Gindele and Prentice do not disclose or suggest the claim elements and the rejection should be withdrawn.

Claims 2-6, 9-11 and 13-14

These claims depend from claim 1 and a prima facie case of obviousness for these claims has not been established for at least the same reasons as claim 1 above.

Furthermore, claim 3 recites "applying a gain factor to one of said signal components includes applying the gain factor only to said high-pass component" which is not disclosed or suggested by the combination of Gindele and Prentice and therefore a prima facie case of obviousness for claim 3 has not been established for this additional reason.

Claim 7

Claim 7 recites "a subdivision unit, for subdividing an incident color signal into a first and second signal component, the first signal component being a low pass component and the second signal component being a high pass component", "a gain factor application unit, for applying a gain factor to one of said components, the gain factor being based upon the incident color channel signal's contribution to total luminance of the display" and "a recombination unit, for

subsequently recombining said first and second signal components into an exiting, modified color channel signal, being used to control said pixel" that are not disclosed or suggested by the combination of Gindele and Prentice.

Gindele shows a method for improving the perceived resolution of a color computer display 30 as shown in Figure 1. A pedestal splitter 30a takes on the red channel, for example, and splits it into components Rtxt and Rped. *See Gindele at Figure 2, column 3, lines 45 to 67.* After that, a slope calculator 37 applies a scalar constant, which supposedly corresponds to the claimed gain factor, based on the color's texture displacement in the overall image, which is also a function of their overall brightness contribution since the color placement of the color channel is factored into the calculated midtone gain. *See Gindele at Figure 2, column 5, lines 5 to 55.* Finally, the texture signal and the pedestal signal are recombined in an adder and exit the system as transformed color image which could be displayed on a computer screen. *See Gindele at Figure 1, 2, columns 3S lines 23 to 44.* The Rtxt and Rped signals in Gindele are pedestal signal (a smooth representation of a digital image channel except for large transition edges) and a texture signal. *See Gindele at col. 4, lines 10-16.* Gindele does not disclose or suggest the claimed subdivision unit that subdivides the incident color channel signal of a pixel into a low pass component and a high pass component, a gain factor application unit that applies a gain factor to one of the low pass component and a high pass component and a recombination unit that recombines the low pass component and a high pass component.

Prentice teaches a color-specific gain factor control based on the luminance channel which is the contribution to the overall luminance of the display when extracted from the image data as a whole. In this way the filtering system of Prentice would be able to factor in the contribution for each of the color channel in terms of luminance when applying color-specific filtering. *See Prentice at Figures 2, 3, paragraphs 16 to 18.* Prentice does not disclose or suggest the claimed subdivision unit that subdivides the incident color channel signal of a pixel into a low pass component and a high pass component, a gain factor application unit that applies a gain factor to one of the low pass component and a high pass component and a recombination unit that recombines the low pass component and a high pass component.

Thus, the combination of Gindele and Prentice do not disclose or suggest the claim elements and the rejection should be withdrawn.

Claim 8

This claim depends from claim 7 and a prima facie case of obviousness for claim 8 has not been established for at least the same reasons as claim 7 above.

Claim 12

Claim 12 recites "a subdivision unit to subdivide, for separate color channel signals, each color channel signal into a first and second signal component, the first signal component being a low pass component and the second signal component being a high pass component", "a gain factor application unit to apply, for each color channel signal, a gain factor to one of said components, the gain factor having a value that is determined from, and inversely proportional to, the contribution of the color channel signal to the total luminance of the color matrix display device" and "a recombination unit to recombine, for each color channel signal, said first and second signal components into a modified color channel signal that is used to control said plurality of pixels" that are not disclosed or suggested by the combination of Gindele and Prentice.

Gindele shows a method for improving the perceived resolution of a color computer display 30 as shown in Figure 1. A pedestal splitter 30a takes on the red channel, for example, and splits it into components Rtxt and Rped. *See Gindele at Figure 2, column 3, lines 45 to 67.* After that, a slope calculator 37 applies a scalar constant, which supposedly corresponds to the claimed gain factor, based on the color's texture displacement in the overall image, which is also a function of their overall brightness contribution since the color placement of the color channel is factored into the calculated midtone gain. *See Gindele at Figure 2, column 5, lines 5 to 55.* Finally, the texture signal and the pedestal signal are recombined in an adder and exit the system as transformed color image which could be displayed on a computer screen. *See Gindele at Figure 1, 2, columns 3& lines 23 to 44.* The Rtxt and Rped signals in Gindele are pedestal signal (a smooth representation of a digital image channel except for large transition edges) and a texture signal. *See Gindele at col. 4, lines 10-16.* Gindele does not disclose or suggest the claimed subdivision unit that subdivides the incident color channel signal of a pixel into a low pass component and a high pass component, a gain factor application unit that applies a gain factor to one of the low pass component and a high pass component and a recombination unit that recombines the low pass component and a high pass component.

Prentice teaches a color-specific gain factor control based on the luminance channel which is the contribution to the overall luminance of the display when extracted from the image data as a whole. In this way the filtering system of Prentice would be able to factor in the contribution for each of the color channel in terms of luminance when applying color-specific filtering. *See Prentice at Figures 2, 3, paragraphs 16 to 18.* Prentice does not disclose or suggest the claimed subdivision unit that subdivides the incident color channel signal of a pixel into a low pass component and a high pass component, a gain factor application unit that applies a gain factor to one of the low pass component and a high pass component and a recombination unit that recombines the low pass component and a high pass component.

Thus, the combination of Gindele and Prentice do not disclose or suggest the claim elements and the rejection should be withdrawn.

Claims 15-16

These claims depend from claim 12 and a prima facie case of obviousness for these claims has not been established for at least the same reasons as claim 12 above.

Claims 13-16

Gindele and Prentice do not teach or suggest the claim elements of the independent claims from which these claims depend and therefore do not disclose or suggest those claim elements in these dependent claims. Furthermore, Hunter does not disclose the disclosure defects of Gindele and Prentice. Therefore, the obviousness rejection of these claims should be withdrawn.

CONCLUSION

In view of the above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to call Applicants' attorney at the number below if doing so will in any way advance prosecution of this application.

The Commissioner is hereby authorized to charge any fees which may be required, or credit in the overpayment, to Deposit Account No. **07-1896** referencing Attorney Docket No. **348162-982480**.

Respectfully submitted,
DLA PIPER LLP (US)

Date: March 21, 2011

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